of information on research in foods, as to methods of preparation and practical use, he may check occasionally with the nutrition division of the local or State health department, or the extension division of the State college of agriculture, for unbiased interpretation of the trends.

A few examples are: The potato steamed in its jacket might often replace the baked potato prescribed for infants; the family oatmeal may be strained for the baby; the whole orange may be eaten instead of juice, when conditions permit; evaporated milk may be used in cooking and concentrated diets; utility cuts of meat may be prepared in a palatable manner.

TABLE 2.—*Foods Which Contain Approximately 7 gm. of Protein (1/10 of the Daily Allowance for an Average Adult)*

Animal Proteins	*Vegetable Proteins*
1 glass milk	½ cup dried beans cooked
1 oz. cheese	2⅓ slices bread
1 egg	1 oz. nuts
1¼ oz. meat	2 T. peanut butter
1¼ oz. fish, poultry or rabbit	⅔ cup cooked cereal

TABLE 3.—*Foundation Menu Providing Daily Protein Allowance for an Average Man*

Breakfast	*Lunch*
Cereal—⅔ cup	Sandwich (with filling of meat, fish, cheese, nuts or eggs) or
Bread—2 slices	Beans—½ cup and bread—2 slices
Egg—1	Milk—1 glass
Milk—1 glass	

Dinner

Meat—¼ lb. (good serving **Bread—1 slice**
Total—71 gm. protein.

Careful Daily Selection to Provide Normal Diet.—Increased income has brought a wider use of luxury—and out-of-season foods, with a frequent poor selection of certain essential foods. It is important to stress, from childhood, the use of a wide variety of foods within each of the seven groups, in order that the various minerals and vitamins that are minute in quantity, be incorporated in the daily diet. For optimal nutrition, the calories should be chiefly provided from foods in their natural state, instead of great amounts of highly-refined starches or sweets. Without a daily consumption of a green or yellow vegetable, a citrus fruit, two or three other fruits or vegetables, a pint of milk, some animal protein, some whole grain cereal, a normal diet will not be attained. Diversion from this dietary pattern, over a period of time, may require correction for deficiencies that may result.

Los Angeles City Health Department, 116 W. Temple St.

Physician Decries Vitamin Buying.—Spending by American people of $25,000,000 this year on vitamins is a deplorable waste of money, in the opinion of Dr. Herman L. Kretschmer of Chicago, president of the American Medical Association, recently in Denver for sessions of the Colorado Medical Society.

"Very few people in this country suffer from vitamin deficiency," Doctor Kretschmer said. "Such deficiency diseases as scurvy, rickets and pellagra have been almost wiped out."

He added that he did not want to decry the magnificent achievements that have been made in recent years by vitamin chemistry, but added, "I think it is ridiculous for people to expect radio announcers and grocerymen to prescribe for their health."

According to Doctor Kretschmer, vitamins should not be taken indiscriminately, but under a doctor's orders.

HOW TO MEET THE NEEDS OF THE NORMAL DIET WITH RATIONING OF FOOD*

FLORA ROSE, D.Sc.
Berkeley

A BRIEF survey of the present food picture, as a whole, and of the problems it presents, is necessary if ways are to be found for meeting this issue satisfactorily.

First. Among the foods now rationed, or of which there is a threat of shortage, are milk, cheese, meat, and canned and frozen fruits and vegetables. Careful thought needs to be given to the means of compensating for nutritive losses which may result from the necessity for reduced consumption of these foods, all of which belong to the group of "protective" foods.

Second. The foods of which there is promise of abundance are the grains and grain products, such as bread and cereals and the dried legumes. This means that the extension of their use may be accepted as a necessity. It means further that dependence may need to be placed on grains and legumes to replace, insofar as possible, nutritive values lost in reduced consumption of milk, cheese, eggs and meat. They will also help replace shortages in fats and sugar. Grains and legumes should now be scrutinized for their "protective" qualities, and careful consideration must be given to the kinds of cereals which are available, and to the methods by which they have been refined or prepared.

Third. Essentially all forms of fat are now rationed. Butter may and will become increasingly short if the milk supply is to be protected. The loss of Vitamin A normally consumed in a good grade of butter will be covered if margarines, reinforced with Vitamin A, continue to be available in reasonable amounts. If, because of their lower point values, fats other than butter are selected by the consumer, the intake of plant-rich sources of provitamin A, or carotene, must be increased if the Vitamin A allowances are to be met. The consumption of fat-rich foods, such as peanuts and peanut butter, and soy beans and nondefatted soy bean products, may need to be increased in the diets of manual workers if the program of three meals a day commonly followed in this country is to furnish the energy required by them at reasonable cost. Furthermore, scraps of meat fats often wasted in the household must be conserved, and ways must be sought for using them. Homemakers must learn to render, to clarify and to make savory and acceptable all fats which reach the household.

Fourth. Serious threats to the adequacy of many diets result from the rationing of canned and frozen fruits and vegetables, and the cost of many fresh fruits and vegetables. Every encouragement should be given to the purchase of those fruits and vegetables which are of greatest nutritional value. Victory garden and home-food preservation programs should be urged.

Fifth. The rationing of sugar has been beneficial rather than otherwise, for the nutritional values of sugar are limited almost entirely to calories and seductive flavor. Increased use of grains and legumes may compensate for the loss of calories from sugar, and may contribute other important food values as well.

OBJECTIVES IN ACHIEVEMENT OF A NORMAL DIET

In the effort to achieve a normal diet in the face of shortages of many common foods, there are three objectives to which special attention needs to be given. In large part, a satisfactory solution of the problem of

* One of several papers in a Symposium on "Civilian Wartime Problems in Nutrition: From the Standpoint of the Physician." Papers collected by Lt. Comdr. Dwight L. Wilbur, MC-V(S), U.S.N.R.

From the College of Home Economics, Cornell University, and Department of Nutrition, Berkeley Public Schools, Berkeley, California.

good nutrition centers in them. These objectives are to provide sufficient protein of good quality; to furnish adequate amounts of minerals, particularly of calcium; and to supply a diet high in all essential vitamins, particularly Vitamin A and riboflavin.

Perhaps the most immediate problem is that of supplying an adequate amount and quality of protein. The new knowledge of nutrition emphasizes the importance not only of a reasonable total daily consumption of protein, but also the significance of the quality of protein. Protein foods are being rated as good or poor in quality in terms of their amino acid content. Specifically, this means that proteins are rated according to the amounts of each of the ten "essential" amino acids contained in them. A goal in the attainment of normal nutrition, therefore, is to include in the day's meals those foods which will furnish the needed abundance of good quality protein. Animal foods, milk, cheese, eggs and meat, all contain proteins of superior quality. The major plant sources of protein, grains and legumes supply proteins of lower quality than those of animal foods.

One situation which gives the nutritionist growing concern is the poor quality of protein in those grain foods which have been highly milled or impoverished, and especially of the white bread in common use in this country. The removal of the germ and aleurone layer from wheat in the manufacture of white flour takes from wheat its proteins of highest quality, proteins in themselves of value sufficient to provide for moderate growth and good maintenance, and leaves behind only proteins of poor quality. In addition, by far the larger part of the minerals and vitamins of wheat are also lost in this process. In this period of food shortages, the enrichment of flour through the addition of three vitamins and one mineral does not entirely compensate for the losses of proteins of high quality, or of some of the other twenty-five or more nutrients largely concentrated in germ and bran, which are sustained in the milling of white flour. Ordinarily this might not be serious. Now, however, it can assume such proportions as to cause actual physical deterioration. The use of whole-grain products is therefore, from the point of view of the quality of protein alone, of great importance at a time when the availability of animal protein foods is restricted. While dried legumes as a whole are richer in protein than grains, the quality of their protein content is inferior.

Wheat germ and debittered brewers yeast, if available, are both sources of proteins of good quality.

The second objective in which the maintenance of a normal diet may be threatened is in the supply of needed amounts of various minerals, particularly of calcium. While a possible deficiency of calcium is, theoretically, simple of solution, actually this may not be the case. Calcium is very unevenly distributed in foods, milk being the only food containing sufficient calcium to meet optimal calcium needs on any practical basis. Curtailment of milk in the diets of growing children, pregnant women and nursing mothers may seriously hamper the development and health of both child and mother. Deficiency of calcium in the diet of other adults, though less spectacular, in effect is also a health hazard. Calcium may easily be included in the diet in one of the many inorganic forms on the market, but understanding of the need for calcium and of this method of meeting it is not general, and should be greatly extended if milk consumption is reduced.

The third field in which there is a possibility for dietary deficiencies during rationing concerns itself with vitamins. Vitamin A may be much reduced in the diets of those persons who have depended largely on milk, cream and butter as its source. Increased use of the green and yellow fruits, and vegetables which are rich in the precursor of Vitamin A, carotene, may be relied upon, however, to overcome this shortage.

The food, whose common use in recommended quantities has been the most important dietary source of riboflavin, is milk. Next in importance, though not comparable in total amounts consumed, have been meats of all kinds and some vegetables. White flour has been enriched in riboflavin until it exceeds whole wheat products in this one respect. However, this difference becomes negligible in solving the problem of the riboflavin content of the diet as a whole. This may mean giving special consideration to all other available foods of good riboflavin content besides milk, meat and whole grains. Soy beans, peanuts, lima beans, eggs, broccoli, green peas, spinach and possibly other greens, sweet potatoes, wheat germ, dried yeast, are good sources of riboflavin.

Increased use of whole grain products and of legumes will do much to restore to the diet material amounts not only of thiamin, riboflavin and niacin, but of some other known members of the Vitamin B complex and possibly others suspected but not identified.

If citrus fruits and tomatoes are scarce or expensive, the Vitamin C content of the diet may be kept high through the use of foods such as raw yellow turnips (rutabagas), raw green cabbage, raw soy bean sprouts, and fresh fruits or raw vegetables as a whole. Potatoes, eaten in quantity, may make a valuable contribution of ascorbic acid, but must be supplemented with other sources of this vitamin.

SUMMARY AND CONCLUSIONS

There is no basis for apprehension on the part of the people of this country that their food needs may not be met on a reasonably normal basis. If, however, the needs of a normal diet are to be met with rationing and restrictions of foods, greater understanding of food values will be necessary, food habits will have to undergo modifications, food choices must be made thoughtfully, and home food production and preservatiion of food must be increased.

1690 La Loma Avenue, Berkeley.

THE PHYSICIAN AND THE OPA IN THE MANAGEMENT OF PATIENTS REQUIRING SPECIAL THERAPEUTIC DIETS*

E. T. REMMEN, M.D.

Glendale

THE advent of food rationing has placed upon the medical profession the serious responsibility of prescribing food for persons who, by reason of impaired health, must have more of certain scarce foods than their allotment of ration points permits them to purchase. Recognizing this necessity, the Office of Price Administration authorized physicians to issue prescriptions for such foods in such quantities as the attending physician deemed necessary. Experience to date has shown that the great majority of physicians have taken this responsibility seriously and, recognizing the necessity for rationing, have been most circumspect and conservative in issuing food prescriptions. A very few physicians, however, have prescribed food in quantities which seemed excessive or occasionally without sufficient medical justification. It has been necessary to establish certain controls because of this very small percentage of the total number of physicians. The method usually followed by the Office of Price Administration has been to request

* One of several papers in a Symposium on "Civilian Wartime Problems in Nutrition: From the Standpoint of the Physician." Papers collected by Lt. Comdr. Dwight L. Wilbur, MC-V(S), U.S.N.R.

From the Office of the Medical Advisory Committee to the Los Angeles O.P.A.